Belton T. Zeigler
Partner
Direct Dial: 803-454-7720
Direct Fax: 803-381-9120
E-mail: Belton.Zeigler@wbd-us.com

Womble Bond Dickinson (US) LLP

1221 Main Street
Suite 1600
Columbia, SC 29201

t: 803.454.6504

January 14, 2022

VIA ELECTRONIC FILING

The Honorable Jocelyn Boyd
Chief Clerk/Executive Director
Public Service Commission of South Carolina
101 Executive Center Drive
Columbia, South Carolina 29210

Re: ***Docket No. 2021-9-E, Dominion Energy South Carolina, Incorporated's 2021 Integrated Resource Plan (IRP) (See also Docket No. 2019-226-E)***

Dear Ms. Boyd:

This letter provides Dominion Energy South Carolina, Inc.'s ("DESC") comments in response to the Review of Dominion Energy South Carolina, Inc.'s 2021 Integrated Resource Plan Update prepared by the South Carolina Office of Regulatory Staff ("ORS") and filed with the Public Service Commission of South Carolina (the "Commission") on December 15, 2021 (the "ORS Report"). DESC appreciates the opportunity to file these comments and thanks the Commission in advance for its consideration of them. DESC also thanks ORS and its consultants for the care with which they have conducted their review of the 2021 IRP Update.

ORS's Three Requests for Immediate Response or Additional Discussion

The ORS Report affirms that DESC's 2021 Integrated Resource Plan Update is reasonable while asking that DESC address three specific matters in these reply comments.

1) ORS recommends the Company provide the same generator level performance data that was provided in the Modified 2020 IRP.

DESC provided the requested information to ORS and all parties on May 24, 2021, when it filed Appendix O to the Modified 2020 IRP. Appendix O included operating data in the form requested by ORS through the close of calendar year 2020.

By way of background, the 2020 IRP provided operating results by type of generator (*e.g.*, combined cycle, combustion turbine, nuclear, fossil steam, solar, hydro). It did so through the end of calendar year 2019, which was the most current year for which data was available. After the Modified 2020 IRP was filed, ORS requested that DESC also provide unit-by-unit generator operating statistics in the form which DESC provides such data annually to the National Electric Reliability Council ("NERC"). Appendix O provided that data and was filed in May of 2021.

In the interest of timeliness and transparency, DESC included in Appendix O not only the data supporting the 2019 operating results summarized in the Modified 2020 IRP, but also included unit-by-unit operating data for calendar year 2020 which had become available by the time the Modified 2020 IRP was filed. Having previously provided that data to ORS and the parties, DESC believed that it was not necessary to provide duplicative information and, therefore, saw no reason to attach it to the current filing as well.

Going forward, when it files each IRP or IRP Update, DESC intends to file operating data up to and including data from the year preceding the filing (assuming that data is available at the time of filing), as is industry practice. As to ORS's current request, at this time operating data for 2021 is being complied, verified and put in form for reporting to NERC. It is not presently in form for distribution. When DESC files its 2022 IRP Update, it will provide all parties with NERC operating data for years up to and including calendar year 2021.

2) ORS recommends that DESC discuss the impact of Internal Combustion Turbine ("ICT" or "CT") resources that appear to operate at higher capacity factor levels than would normally be expected.

In reviewing generation capacity outputs embedded in the PLEXOS modeling results, ORS noticed that the capacity factors for ICT and CT units were higher than would be anticipated for generating units of this type. ORS pointed out this anomaly to DESC, and after review DESC determined that ORS was correct in identifying this issue. The PLEXOS model had erred in calculating heat rates for one category of gas-fired internal combustion units, the Frame CTs. This error resulted from the way PLEXOS calculates heat rates when the number of heat rate points (*i.e.,* heat rates at different MW outputs for the units) changes during a calendar year. PLEXOS requires an identical number of heat rate points for summer and winter where prior software did not. Inputting into PLEXOS a different number of heat rate points for summer and winter resulted in the miscalculation of the heat rate. As a result, the software dispatched these units more frequently than would otherwise have been the case increasing capacity factors. DESC is working with Energy Exemplar, LLC, the owner and licensor of PLEXOS, on this issue.

In the meantime, DESC undertook an analysis to determine whether the incorrect heat rates for these units had a material effect on the relative rankings of the fourteen resource plans evaluated in the IRP. To do so, DESC reran the PLEXOS model for each of the fourteen generation plans using the High DSM, Low Gas, and zero CO_2 cost scenario. In these runs, DESC used heat rate points for Frame CTs which avoided the software issue in PLEXOS.

Correcting the heat rates for the Frame CTs in this manner affected the cost of all resource plans by a similar amount and produced no material differences in the ranking of the fourteen resource plans. CTs, which have relatively low construction costs, are built primarily for their capacity contribution to the system and not because of their fuel efficiency. For that reason, they do not typically make a large contribution to system energy. As a result, the incorrect heat rates and related capacity factors did not materially affect the rankings which are a reflection of relative costs.

DESC has shared its modeling results with ORS. In its report, ORS states that:

> *ORS agrees that this issue is not likely to cause a significant impact on the final costs of various portfolios, especially considering that these units are typically only built in later years of the study period and in relatively similar quantities across most model runs. Still, ORS recommends that in this IRP the Company discuss further the impacts ICT resources had on the Company's results, and explain the materiality of the impacts on the final costs and relative portfolio rankings.*

(ORS Report filed p. 54).

For the reasons and analysis stated here, DESC agrees with ORS's conclusions that the heat-rate issue did not materially impact the results of the IRP analysis and commits to ensure that the heat rates from Frame CTs are accurately handled in PLEXOS for future IRPs including the 2022 IRP Update this year.

3) ORS recommends DESC explain the potential disconnect between Order No. 2021-429 requiring realistic and levelized DSM costs in this IRP.

DESC does not believe that there is any material disconnect between its DSM costs and the requirement in Order No. 2021-429 that they be realistic and levelized.

The DSM costs used in this IRP are based, in the first instance, on the 2019 Potential Study and Program Plan Report ("2019 Potential Study") prepared by a third-party, nationally-recognized firm of DSM planning and implementation experts, ICF. Specifically, the 2019 Potential Study was prepared with stakeholder review and input as to both scope, methodology and draft conclusions. After full contested-case discovery, testimony and review, ORS and the Commission found programs and program costs based on the 2019 Potential Study to be reasonable.

Later, in Order 2020-832, the Commission required DESC to determine whether higher levels of demand reductions could be achieved through expanded DSM programs evaluated by means of a Rapid Assessment of expanded DSM programs. Order No. 2020-832, pp. 75-76. In response, DESC commissioned ICF to conduct this Rapid Assessment based on modified assumptions as to acceptable scope, costs and implementation schedules for programs. The Rapid Assessment and associated DSM program cost analysis were conducted with extensive stakeholder involvement.

The Modified 2020 IRP used DSM program costs produced in the Rapid Assessment and associated cost studies. These cost data points continue to be the most current estimates for DESC's DSM costs and for that reason were used in the 2021 IRP Update. DESC has no basis to believe that they are unreasonable.

A new full-scope, Market Assessment and Potential Study is underway to inform DESC's 2024 DSM program revisions. Updated DSM program costs will be prepared as part of the new Potential Study and will be used in future IRP planning models. However, the DSM costs based on the 2019 Potential Study and 2021 Rapid Assessment and related analyses remain reasonable costs to be used in DSM IRP scenarios at this time.

DESC is also unaware of any basis to conclude that there is a disconnect between DSM costs as currently reflected in this 2021 IRP Update and the mandate that these costs be levelized. The modeling of the fourteen resources plans presented in the 2021 IRP Update levelizes DSM costs along with other costs to calculate the levelized cost of each resource plan. Levelized costs are computed and presented in the 2019 DSM Potential Study and will be calculated in the forthcoming version of that study.

In the DSM planning process that produced the current DSM programs and program costs estimates, those programs were evaluated and their costs were forecasted on a ten-year cycle. To create forty years of DSM costs, DESC's assumed that new programs would be substituted for the old ones at the end of each ten-year cycle. This approach results in a cyclical pattern for annual DSM program costs. As older DSM programs are terminated their costs go away. Costs then build up for the new programs in the years after they are implemented. The alternative would have been to allow these programs to roll off without replacement.

This approach to modeling DSM costs in the later years of the IRP planning horizon was applied consistently across all resource plans and does not affect the relative rankings of any single resource plan. This method is analytically reasonable but DESC is open to considering other methods in future IRPs.

ORS Suggestions for Future Implementation

In its Report, ORS makes fifteen suggestions for future implementation. A number of these concern actions that are already implemented, are partially implemented or are otherwise under way and ongoing.[1] In almost all cases, these actions are mandated by Order 2020-832 or Order No. 2021-429, required by statute, or are otherwise actions to which DESC has committed in its filings with the Commission. DESC intends to continue to implement these items consistent with the terms of the operative orders, statutes or commitments. DESC reserves the right to seek revisions to these items as future circumstances may require.

In addition, ORS recommends that DESC discuss with the IRP Stakeholder Advisory Group the use of extreme CO_2 cost assumptions in future IRP modeling. DESC is willing to hold such a discussion. But DESC does not support embedding extreme or unrealistic assumptions

[1] The actions that are already implemented in whole or in part, or are underway and ongoing include the actions referenced at bullets one-four, six-eleven, and fourteen on filed pages five-seven of the ORS Report,

concerning any key variable in the IRP modeling which form a part of the quantitative evaluations of competing approaches to meeting customers' demands. While conducting analyses using costs that are extreme or otherwise not plausible may have value in limited contexts, embedding such assumptions in operative IRP scenarios is not useful from a planning context. Modeling which is based on unrealistic inputs will not produce realistic resource plans, and doing so is not in customers' interests.

ORS recommends that in future IRPs, DESC include additional information related to transmission and distribution plans and the status of completed, deferred and on-going transmission construction projects. DESC will undertake to do so, but for security reasons can only do so consistent with the limitations on public disclosure of Critical Energy Infrastructure Information ("CEII").

Finally, ORS recommends that in all future comprehensive IRPs DESC provide "an analysis of the costs and benefits of participation in the Southeast Energy Exchange Market ("SEEM")." ORS states that "[t]his assessment will be useful in determining if the anticipated $40-100[2] million in benefits have actually materialized and will be helpful in evaluating if continued participation in the SEEM is warranted."

DESC disagrees with the assumption that an IRP is the proper venue for evaluating the cost effectiveness of a specific wholesale power exchange like SEEM. An IRP is a forward-looking process. It focuses on how best to meet customers' future energy requirements. Including a backward-looking analyses of the cost effectiveness of an individual energy purchasing program would be inconsistent with the scope and nature of an IRP.

Conclusion

DESC believes that this letter provides a reasonable response to the issues raised in the ORS Report. However, any particular point raised by ORS and not addressed specifically in this letter should not be taken as DESC's agreement with that point. To the extent that any issue raised by ORS conflicts with the Modified 2020 IRP, the 2021 IRP Update, or other commitments made by the Company, or any statute or order, the Company objects accordingly.

Respectfully submitted,

/s/Belton T. Zeigler
Womble Bond Dickinson (US) LLP
1221 Main Street, Suite 1600
Columbia, SC 29201
(803) 454-7720
belton.zeigler@wbd-us.com

Attorney for Dominion Energy South Carolina, Inc.

cc: All counsel of record

[2] Please note that these estimates reflect savings across the entire SEEM footprint and are not specific to DESC.